RECEIVED

FEB 17 2011

DEQ/WPB PERMITTING & COMPLIANCE DIV.

Montana Department of ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

Agency Use	
Permit No.:	MTG010271
Date Rec'd	2/17/11
Rec'd By	bd

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For Filling Out Form NMP," found at the back of the Form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your Form 2B. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. For additional help in filling out this form please read the attached instructions. The 2008 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A - NMP Status *(Check one):*

☒ New — No prior NMP submitted for this site.

☐ Modification — Change or update to existing NMP.

Permit Number: MT _____ (Specify the permit number that was previously assigned to your facility.)

Section B - Facility or Site Information:

Site Name Charley Creek Cattle Co., Inc.

Site Location T27N R53E NW1/4 Section 12

Nearest City or Town Brockton County Richland

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name Charley Creek Cattle Co., Inc.

Mailing Address 15299 County Road 321

City, State, and Zip Code Brockton, MT 59213

Phone Number 406-787-5274

Section D - NMP Minimum Elements:

1. Livestock Statistics

Animal Type and number of animals	*# of Days on Site (per year)*	*Annual Manure Production (tons, cu. yds.or gal)*
1. Feeder calves - 400 head	150	157 tons
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Method used for estimating annual manure production:

Obtain the following for livestock in each category: number of head, average time on site, incoming and outgoing weight. Calculate average animal weight, obtain manure production value from Circular DEQ 9 and calculate manure produced as described in Circular DEQ 9.

2. Manure Handling

Describe manure handling at the facility:

Manure will be left undisturbed in each pen until September of each year. In September a manure sample will be taken and analyzed for nutrient content and spread on fields. A two inch manure pack will be maintained over the entire pen area for its water holding capacity.

Frequency of Manure Removal from confinement areas:

Manure will be removed from confinement areas annually in September.

Is this manure temporarily stored in any location other than the confinement area? ☐ Yes ☑ No

If so then how and where?

Is manure stored on impervious surface? ☐ Yes ☑ No

If yes, describe type and characteristics of this surface:

3. Waste Control Structures

Waste Control Structure (name/type)	*Length (ft)*	*Width (ft)*	*Depth (ft)*	*Volume (cubic ft or gallons)*
1. Pen water diversion dike	926	4 @ top	2	
2. Waste transfer pipeline	885			
3. Settling basin	10	60		819 cubic feet
4. Vegetative treatment area	270	300		1.86 acres
5. Vegetative treatment dike	792	4 @ top	2	
6. Clean water diversion dike	977	4 @ top	2	
7.				
8.				
9.				
10.				
11.				
12.				

4. Disposal of Dead Animals

Describe how dead animals are disposed of at this facility:

Dead animals will be removed from the feedlot as soon as possible after death. Individual animals will be buried on Tract 8946. Carcasses will be covered with 2 feet of dirt as soon as possible according to Circular DEQ 9 specifications. Location Lat 48.112 Long 104.836

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

A series of earth dikes divert clean water away from the feedlot and over a level lip spreader.

6. Prohibiting Animals and Wastes from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

Animals are prohibited from direct contact with state waters by fences. Clean water is diverted from the feedlot by a series of earth dikes. Another series of earth dikes divert pen water into a pipeline that leads to a settling pond. Water from the settling pond moves into a vegetative treatment area that is surrounded by earth dikes.

Describe how chemicals and other contaminants are handled on-site:

Herbicides are stored and prepared for use off-site. Manufacturers' instructions will be followed for safe chemical handling and application. Livestock pesticides are stored off-site and administered to animals by pour on or injection according to manufacturers' instructions. Livestock pharmaceuticals are stored off-site and administered to animals according to manufacturers' instructions. Any chemical containers that are emptied at the site will be promptly removed and disposed of according to state and federal regulations.

8. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **production area**. Indicate the location of these measures. Include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces, and waterways above an open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

During the construction phase temporary silt fences and straw bale dikes will be installed to control sediment runoff. Permanent structures include a series of earth dikes to divert clean water away from the feedlot and over a level lip spreader. Another series of dikes will divert pen water into a pipeline that leads to a settling pond. Water from the settling pond moves over a level lip spreader and into a vegetative treatment area that is surrounded by dikes. Water tanks will have overflow drains and will be regularly inspected to minimize water wastage. Water tanks will be shut off when not in use. These practices will be implemented during construction in 2011. A dry ration is fed so there is no silage runoff.

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **land application area**. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; never spray irrigating wastes onto frozen ground; consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Plant sampling/tissue analysis	✓ yes/no	Rotational grazing	yes/no ✓
Conservation or reduced tillage	✓ yes/no	Manure injection or incorporation	yes/no ✓
Terraces or other water control structures	yes/no ✓	Contour plantings	yes/no ✓
Riparian buffers or vegetative filter strips	✓ yes/no	Winter "scavenger" or cover crops	✓ yes/no

Other examples On Tract 8955 Field 4 a soil health/grazing cocktail is seeded after barley harvest and irrigation is managed to prevent waste water ponding. Maintain manure application setbacks on all fields in Tracts 8945, 8944, 8955.

9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ✓ Yes No

Certify the document addresses the following requirements:

Implementation of the NMP:	✓ Yes	No
Facility operation and maintenance:	✓ Yes	No
Record keeping and reporting:	✓ Yes	No
Sample collection and analysis:	✓ Yes	No
Manure transfer:	✓ Yes	No

Provide name, date and location of most recent documentation:

NRCS Comprehensive Nutrient Management Plan

USDA - Natural Resources Conservation Service

Sidney Field Office, Sidney, MT 59270

If your answer to any of the above question is no, provide explanation

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

No If no, then provide an explanation of how animal waste at this site are managed.

■ Yes If yes, then the information requested in Section E must be provided.

T8946 Fields 1 & 2, T8945 Fields 3,4,5 & 6, T8955 Fields 2, 4 & 5

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"x17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any down-gradient surface waters
- The location of any down-gradient open tile line intake structures
- The location of any down-gradient sinkholes
- The location of any down-gradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field.
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibrating procedures:

A commercial broadcast spreader will be calibrated according to Circular DEQ 9 instructions.

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining application rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to the following method:

■ The recommended method(s) found in Section 5 of Department Circular DEQ 9

Other (describe) _____

Soil Sampling and Analysis Procedures

A representative soil sample from the top 6 inch layer of soil in each field will be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

Soil sample collection will occur according to the following method:

■ The recommended method(s) found in Section 5 of Department Circular DEQ 9

Other (describe) _____

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure

Field Name and spreadable acres for each (for fields with identical crops and soils type):

Tract 8946 Fields 1,2 52.7 Spreadable Acres Inter-seeded Grass

Crop 1 (year 1 or ?) plant species	Grass
Irrigated (Y/N)	No
Yield Goal (ton/ac or bushel/ac)	2 ton/acre
N Content of soil as nitrate (lbs/acre or ppm)	122 lbs/acre
P Content of soil as P_2O_5 (lbs/acre or ppm)	4 ppm
Time of Year When Application will Occur (month)	September
Application frequency (per year by month)	Annual in September
Form of manure (liquid/solid)	Solid
Method of Application	Commercial Spreader
Is manure incorporated or broadcast?	Broadcast
Frequency of Application (yearly, biannual, etc.?)	Yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

■ Method A – Representative Soil Sample
Method B – Phosphorus Index

Method A – Representative Soil Sample

a) Obtain one or more representative soil sample(s) from the field.
b) Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm).
c) Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
Olsen P Soil Test Result (ppm)	***Application Basis***
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

Method B – Phosphorus Index

a) Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
b) Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
Total Phosphorus Index Value	***Site Vulnerability to Phosphorus Loss***
<11	Low
11-21	Medium
22-43	High
>43	Very High

c) Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
Site Vulnerability to Phosphorus Loss	***Application Basis***
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	50	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	0	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	0	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0	
(-)	Nutrients supplied in irrigation water, lbs/acre	0	
	= Additional Nutrients Needed, lbs/acre	50	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	37.4	
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	.5	
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	18.7	
	Additional Nutrients needed, lbs/acre (calculated above)	50	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	18.7	
	= Manure Application Rate, tons/acre or 1,000 gal/acre	2.67	

Comments:

Tract 8946 Fields 1 and 2 Grass 2 ton/acre yield.

The feedlot will be constructed in 2011. No manure has been generated at this site for testing.

Fields in this tract were planted to grass in May 2001. This data is based on 1998 soil tests and

an estimate of manure nutrients. New soil, and manure analysis tests will be obtained before the

first manure is spread in 2012.

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type): Tract 8945 Fields 3,4,5,6 88.7 Spreadable Acres Inter-seeded Grass	
Crop 1 (year 1 or ?) plant species	Grass
Irrigated (Y/N)	No
Yield Goal (ton/ac or bushel/ac)	2 ton/acre
N Content of soil as nitrate (lbs/acre or ppm)	122 lbs/acre
P Content of soil as P_2O_5 (lbs/acre or ppm)	4 ppm
Time of Year When Application will Occur (month)	September
Application frequency (per year by month)	Annual in September
Form of manure (liquid/solid)	Solid
Method of Application	Commercial Spreader
Is manure incorporated or broadcast?	Broadcast
Frequency of Application (yearly, biannual, etc.?)	Yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	50	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	0	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	0	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0	
(-)	Nutrients supplied in irrigation water, lbs/acre	0	
	= Additional Nutrients Needed, lbs/acre	50	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	37.4	
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	.5	
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	18.7	
	Additional Nutrients needed, lbs/acre (calculated above)	50	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	18.7	
	= Manure Application Rate, tons/acre or 1,000 gal/acre	2.67	

Comments:

Tract 8945 Fields 3,4,5,6 Grass 2 ton/acre yield.

The feedlot will be constructed in 2011. No manure has been generated at this site for testing. Fields in this tract were planted to grass in May 2001. This data is based on 1998 soil tests and an estimate of manure nutrients. New soil, and manure analysis tests will be obtained before the first manure is spread in 2012.

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type): Tract 8955 Field 2 14 Spreadable Acres Cropland	
Crop 1 (year 1 or ?) plant species	Barley
Irrigated (Y/N)	No
Yield Goal (ton/ac or bushel/ac)	60 bushel/acre
N Content of soil as nitrate (lbs/acre or ppm)	56 lbs/acre
P Content of soil as P_2O_5 (lbs/acre or ppm)	9 ppm
Time of Year When Application will Occur (month)	September
Application frequency (per year by month)	Annual in September
Form of manure (liquid/solid)	Solid
Method of Application	Commercial Spreader
Is manure incorporated or broadcast?	Broadcast
Frequency of Application (yearly, biannual, etc.?)	Yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	96	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	0	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	0	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0	
(-)	Nutrients supplied in irrigation water, lbs/acre	0	
	= Additional Nutrients Needed, lbs/acre	96	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	37.4	
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	.5	
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	18.7	
	Additional Nutrients needed, lbs/acre (calculated above)	96	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	18.7	
	= Manure Application Rate, tons/acre or 1,000 gal/acre	5.13	

Comments:

Tract 8955 Field 2 Feed Barley 60 bushel/acre yield.

The feedlot will be constructed in 2011. No manure has been generated at this site for testing.

This data is based on 2002 soil tests and an estimate of manure nutrients. New soil and manure analysis tests will be obtained before the first manure is spread in 2012.

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type): Tract 8955 Field 4 43.1 Spreadable Acres Irrigated Cropland	
Crop 1 (year 1 or ?) plant species	Barley
Irrigated (Y/N)	No
Yield Goal (ton/ac or bushel/ac)	100 bushel/acre
N Content of soil as nitrate (lbs/acre or ppm)	91 lbs/acre
P Content of soil as P_2O_5 (lbs/acre or ppm)	10 ppm
Time of Year When Application will Occur (month)	September
Application frequency (per year by month)	Annual in September
Form of manure (liquid/solid)	Solid
Method of Application	Commercial Spreader
Is manure incorporated or broadcast?	Broadcast
Frequency of Application (yearly, biannual, etc.?)	Yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	160	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	65	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	0	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0	
(-)	Nutrients supplied in irrigation water, lbs/acre	0	
	= Additional Nutrients Needed, lbs/acre	95	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	37.4	
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	.5	
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	18.7	
	Additional Nutrients needed, lbs/acre (calculated above)	95	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	18.7	
	= Manure Application Rate, tons/acre or 1,000 gal/acre	5.08	

Comments:

Tract 8955 Field 4 Irrigated Feed Barley 100 bushel/acre yield.

The feedlot will be constructed in 2011. No manure has been generated at this site for testing.

This data is based on 2002 soil tests and an estimate of manure nutrients. New soil and manure analysis tests will be obtained before the first manure is spread in 2012.

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type): Tract 8955 Field 5 12.1 Spreadable Acres Cropland	
Crop 1 (year 1 or ?) plant species	Barley
Irrigated (Y/N)	No
Yield Goal (ton/ac or bushel/ac)	60 bushel/acre
N Content of soil as nitrate (lbs/acre or ppm)	64 lbs/acre
P Content of soil as P_2O_5 (lbs/acre or ppm)	11 ppm
Time of Year When Application will Occur (month)	September
Application frequency (per year by month)	Annual in September
Form of manure (liquid/solid)	Solid
Method of Application	Commercial Spreader
Is manure incorporated or broadcast?	Broadcast
Frequency of Application (yearly, biannual, etc.?)	Yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	96	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	65	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	0	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0	
(-)	Nutrients supplied in irrigation water, lbs/acre	0	
	= Additional Nutrients Needed, lbs/acre	31	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	37.4	
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	.5	
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	18.7	
	Additional Nutrients needed, lbs/acre (calculated above)	31	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	18.7	
	= Manure Application Rate, tons/acre or 1,000 gal/acre	1.66	

Comments:

Tract 8955 Field 5 Feed Barley 60 bushel/acre yield.

The feedlot will be constructed in 2011. No manure has been generated at this site for testing. This data is based on 2002 soil tests and an estimate of manure nutrients. New soil and manure analysis tests will be obtained before the first manure is spread in 2012.

Section F - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
Mark Casterline	
B. Title (Type or Print)	**C. Phone No.**
Vice-President	406-787-5274
D. Signature	**E. Date Signed**
Mark Casterline	2-16-11

Return the Form NMP, Nutrient Management Plan to:

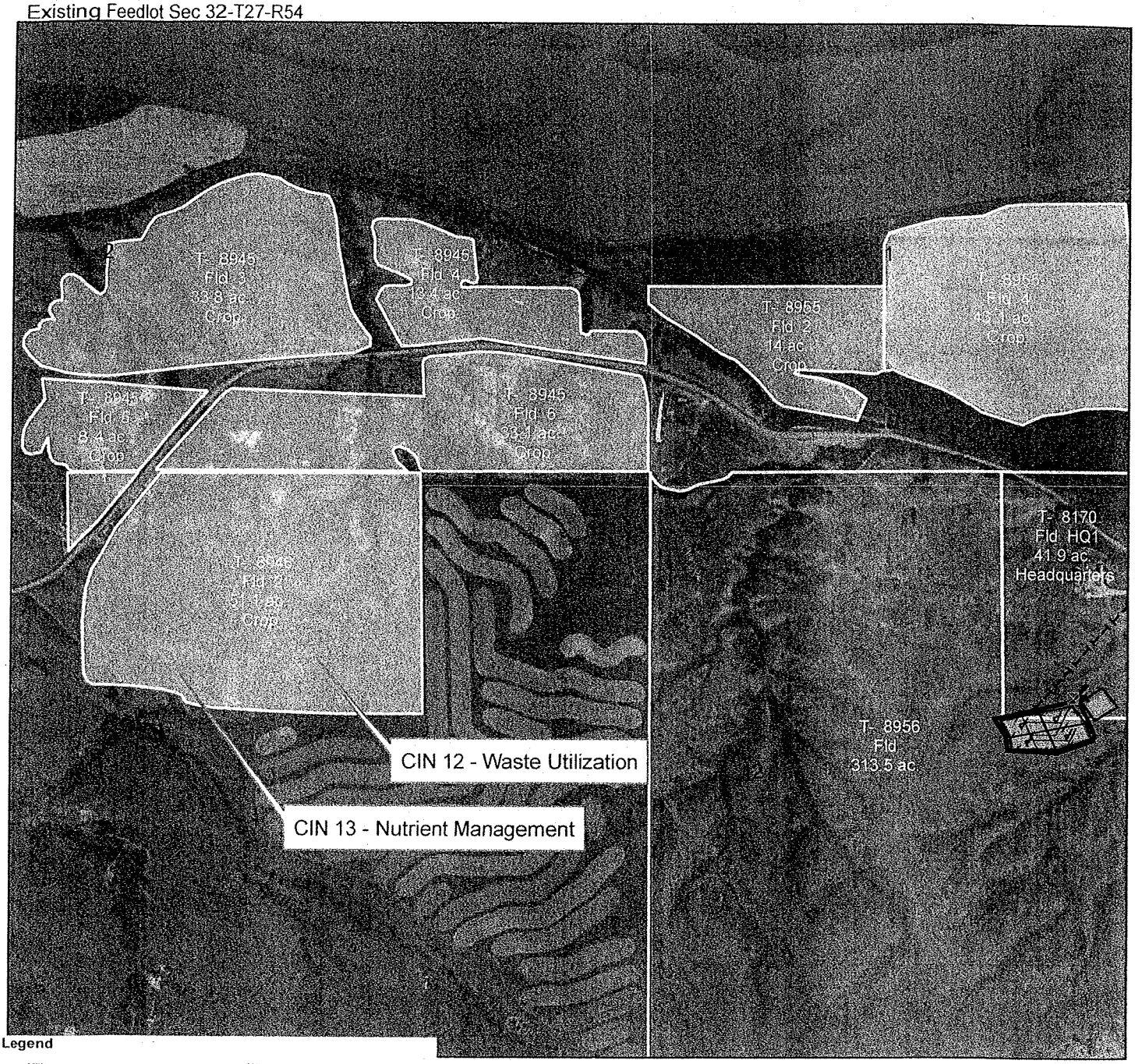
Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

CONSERVATION PLAN

Customer(s): CHARLEY CREEK CATTLE CO INC
District: RICHLAND COUNTY CONSERVATION DISTRICT

Field Office: SIDNEY FIELD OFFICE
Agency: USDA-NRCS
Assisted By: Jamie P Selting
State and County: MT, RICHLAND

Legal Description: Planned Feedlot Sec 12-T27-R53
Existing Feedlot Sec 32-T27-R54

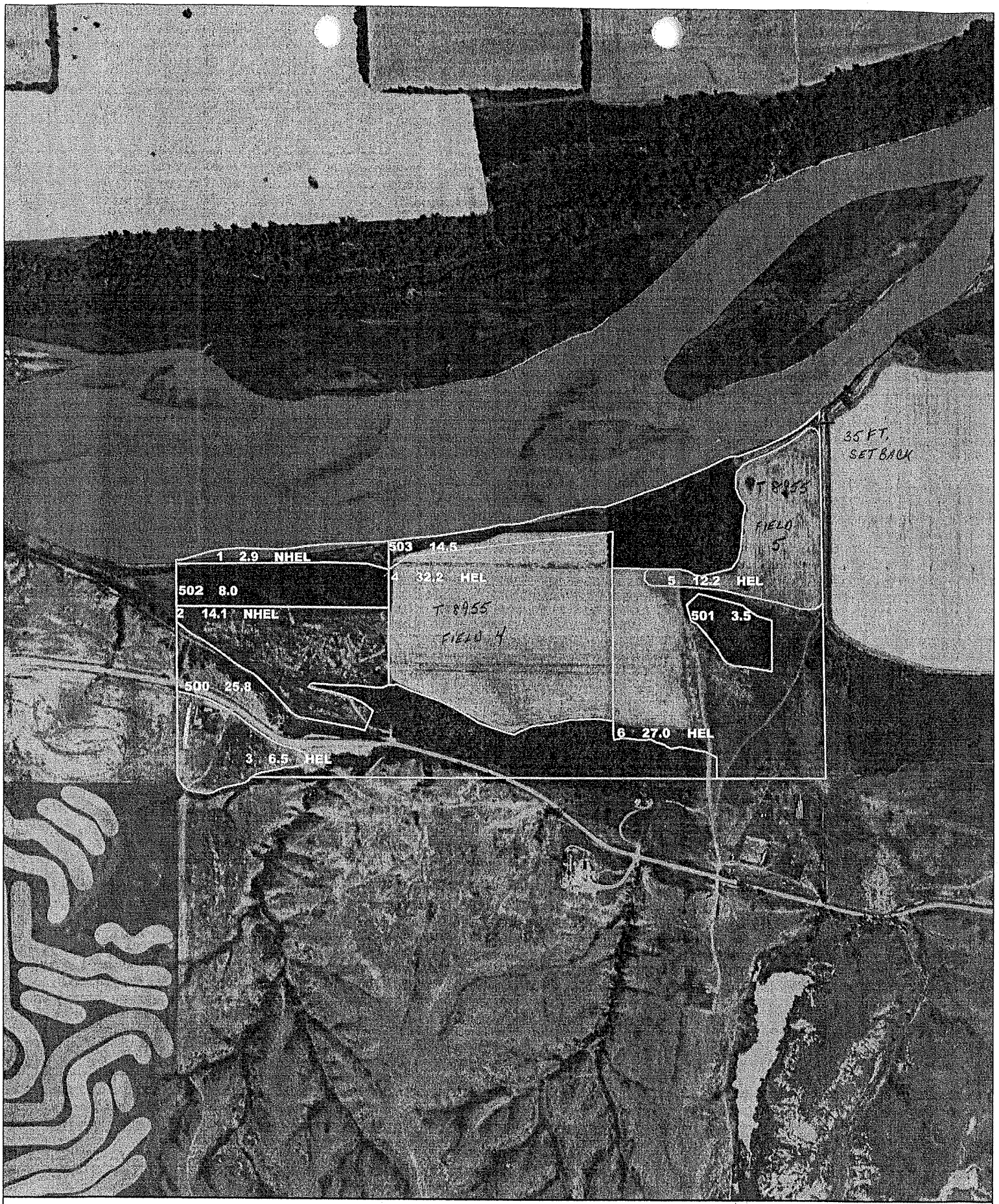


Legend

- Pumping Plant
- Structure for Water Control
- Water Well
- Watering Facility
- Fence
- Diversion
- Fence
- Pipeline
- AFO/CAFO 2010
- plss_a_mt083
- Pond Sealing or Lining
- Critical Area Planting
- Heavy Use Area Protection
- Obstruction Removal
- Waste Storage Facility
- Waste Utilization

N

630 0 630 1,260 1,890 2,520 Feet



Tract 8955
Farm 4427
1-27-53

Richland County FSA

Clu_a_mt083.shp

N

0.08 0 0.08 0.16 0.24 0.32 Miles

Map Printed:Oct 3, 2006

AgriSource Laboratories ▪ P.O. Box 510, Hwy 15 ▪ Northwood, ND 58267 ▪ 701-587-6010 ▪ Main Office #: 612-451-4300

TRACTS 8946, 8945

4-16-98

	Submitted By: FUOC/FERT-WILLISTON 209 WASHINGTON AVE WILLISTON, ND 58801 701-572-8354	**Grower:** MARK CASTERLINE BROCKTON, MT	
SOIL			
TEST			
REPORT	**Date Sampled:** 04/10/98 **Date Received:** 04/14/98 **Date Reported:** 04/15/98 **Coop:** **Lab Sample Number:** 803598 **Reference #:** 5361453	**Sple Id:** **Fld Id:** 5 **Acr:** 100.0 **Prv Crp:** FALLOW **Twnshp:** **Sec:** **County:** RICHLAND **Lab Loc.:** NORTHWOOD	

	Test Results	Interpretation	Calculated Guideline	NW	NE
				SW	SE
Texture			Guidelines		
pH	7.9	MODERATELY BASIC	Pounds Per Acre(Broadcast Rate)		
CEC			1998	1998	1998
Sodium% CEC					
Sol. Salts	1.4 mmho	SLIGHTLY SALINE			
Org. Matter	2.2 %	LOW	SAFFLOWER	SAFFLOWER	SAFFLOWER
Nitrogen					
0- 6	29 LB/A		1000 LB/A	1100 LB/A	1200 LB/A
6- 24	93 LB/A				
		VL L M H VH			
TOTAL	122 LB/A	**********	N 0	0	0
Phos. Olsen	4 PPM	****	P2O5 35	40	40
Potassium	250 PPM	**********	K2O 0	0	0
Calcium			Ca		
Magnesium			Mg		
Sulfur					
TOTAL			S		
Boron			B		
Zinc			Zn		
Manganese			Mn		
Copper			Cu		
Iron			Fe		

EXPECTED CROP REMOVAL N-P2O5-K2O

TRACT 8955
FIELD 2

AGVISE LABORATORIES

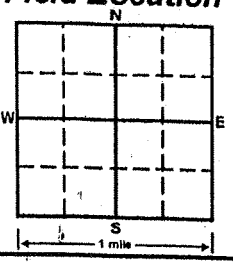
Soil Analysis by Agvise Laboratories

SOIL TEST REPORT

FIELD #6
CNTY
TWP
QTR
PREV. CROP **Barley**

SAMPLE
SECTION
ACRES **50.0**

Field Location



SUBMITTED FOR:
MARK CASTERLINE
HCR 80, BOX 410

BROCKTON MT
59213

SUBMITTED BY: **FA1886**
FUOC/FERT-WILLISTON
209 WASHINGTON AVE

WILLISTON ND
58801

REF# **7001881**
LAB# **17419**
BOX# **3473**

Date Sampled:	08/20/2002	Date Received:	08/27/2002	Date Reported:	09/03/2002

NUTRIENT IN THE SOIL		INTERPRETATION			
		VLow	Low	Med	High
0-6" Nitrate	20 lb/ac	****	***		
6-24" Nitrate	36 lb/ac				
0-24" Nitrate	56 lb/ac				
Olsen Phosphorus	9 ppm	****	****	**	
Potassium	357 ppm	****	****	****	****
0-24" Chloride	24 lb/ac	****	***		
0-6" Sulfur	28 lb/ac	****	****	***	
6-24" Sulfur	84 lb/ac	****	****	***	
Boron					
Zinc	1.29 ppm	****	****	****	**
Iron					
Manganese					
Copper	1.63 ppm	****	****	****	****
Magnesium					
Calcium					
Sodium					
Org.Matter	3.6 %	****	****	**	
0-6" Sol. Salts	0.35 mmho/cm	****	**		
6-24" Sol. Salts	0.33 mmho/cm	****	**		

1ST CROP CHOICE		
Barley-Malting		
YIELD GOAL		
60 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	24	
P_2O_5	45	Broadcast
K_2O	10	Band(Starter)*
Cl	16	Broadcast
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

2ND CROP CHOICE		
Oats		
YIELD GOAL		
70 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	30	
P_2O_5	33	Broadcast
K_2O	10	Band(Starter)*
Cl	16	Broadcast
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

3RD CROP CHOICE		
Oats		
YIELD GOAL		
80 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	30	
P_2O_5	38	Broadcast
K_2O	10	Band(Starter)*
Cl	16	Broadcast
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
8.1							

Crop 1: 35 lbs of 0-0-60 = 16 lbs of Chloride * Caution: Seed Placed Fertilizer Can Cause Injury * You may consider reducing nitrogen rates 14 lbs/ac on AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 28 K2O = 30 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: 35 lbs of 0-0-60 = 16 lbs of Chloride * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen Guidelines have been adjusted because most of the Nitrgen in this field is deep. You may consi reducing nitrogen rates 14 lbs/ac on AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 18 K2O = 13 AGVISE Broadcast guidelines will build P & K test levels to the high range over severa years.
Crop 3: 35 lbs of 0-0-60 = 16 lbs of Chloride * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen Guidelines have been adjusted because most of the Nitrgen in this field is deep. You may consi reducing nitrogen rates 14 lbs/ac on AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 20 K2O = 15 AGVISE Broadcast guidelines will build P & K test levels to the high range over severa years.

TRACT 8955
FIELD 4

AGVISE LABORATORIES

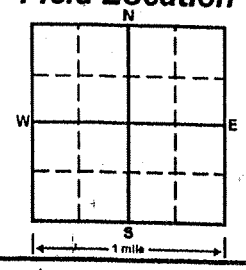
Soil Analysis by Agvise Laboratories

SOIL TEST REPORT

FIELD #5
CNTY
TWP
QTR
PREV. CROP **Barley**

SAMPLE
SECTION
ACRES **50.0**

Field Location



SUBMITTED FOR:
MARK CASTERLINE
HCR 80, BOX 410

BROCKTON MT
59213

SUBMITTED BY: **FA1886**
FUOC/FERT-WILLISTON
209 WASHINGTON AVE

WILLISTON ND
58801

REF# **7001880**
LAB# **17418**
BOX# **3473**

Date Sampled:	08/20/2002	Date Received:	08/27/2002	Date Reported:	09/03/2002

NUTRIENT IN THE SOIL		INTERPRETATION			
		VLow	Low	Med	High
Nitrate	0-6" 28 lb/ac 6-24" 36 lb/ac 0-24" 64 lb/ac	****	***		
Olsen Phosphorus	11 ppm	****	****	***	
Potassium	360 ppm	****	****	****	****
Chloride	0-24" 44 lb/ac	****	****	****	
Sulfur	0-6" 28 lb/ac 6-24" 72 lb/ac	**** ****	**** ****	*** ***	
Boron					
Zinc	2.33 ppm	****	****	****	****
Iron					
Manganese					
Copper	3.35 ppm	****	****	****	****
Magnesium					
Calcium					
Sodium					
Org.Matter	4.2 %	****	****	***	
Sol. Salts	0-6" 0.6 mmho/cm 6-24" 0.64 mmho/cm	**** ****	**** ****	** ***	

1ST CROP CHOICE		
Barley-Malting		
YIELD GOAL		
60 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	16	
P_2O_5	39	Broadcast
K_2O	10	Band(Starter)*
Cl	0	
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

2ND CROP CHOICE		
Oats		
YIELD GOAL		
70 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	22	
P_2O_5	29	Broadcast
K_2O	10	Band(Starter)*
Cl	0	
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

3RD CROP CHOICE		
Oats		
YIELD GOAL		
80 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	22	
P_2O_5	33	Broadcast
K_2O	10	Band(Starter)*
Cl	0	
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
8.0							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * You may consider reducing nitrogen rates 14 lbs/ac on AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 28 K2O = 30 AGVI
Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen Guidelines have been adjusted because most of the Nitrgen in this field is deep. You may consider reducing nitrogen rates 14 lbs/ac
AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 18 K2O = 13 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen Guidelines have been adjusted because most of the Nitrgen in this field is deep. You may consider reducing nitrogen rates 14 lbs/ac
AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 20 K2O = 15 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

TRACT 8955
FIELD 5

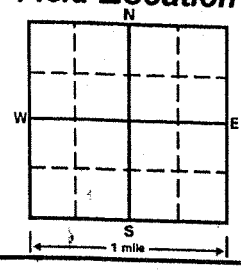
AGVISE LABORATORIES

Soil Analysis by Agvise Laboratories

SOIL TEST REPORT

FIELD #4
CNTY
TWP
QTR
PREV. CROP **Barley**
SAMPLE
SECTION
ACRES **50.0**

Field Location



SUBMITTED FOR:
MARK CASTERLINE
HCR 80, BOX 410

BROCKTON MT
59213

SUBMITTED BY: **FA1886**
FUOC/FERT-WILLISTON
209 WASHINGTON AVE

WILLISTON ND
58801

REF# **7001879**
LAB# **17417**
BOX# **3473**

Date Sampled:	08/20/2002	Date Received:	08/27/2002	Date Reported:	09/03/2002

NUTRIENT IN THE SOIL		INTERPRETATION			
		VLow	Low	Med	High
0-6" Nitrate	28 lb/ac	****	****	**	
6-24" Nitrate	63 lb/ac				
0-24" Nitrate	91 lb/ac				
Olsen Phosphorus	10 ppm	****	****	***	
Potassium	388 ppm	****	****	****	****
0-24" Chloride	32 lb/ac	****	****	*	
0-6" Sulfur	42 lb/ac	****	****	****	***
6-24" Sulfur	78 lb/ac	****	****	***	
Boron					
Zinc	1.56 ppm	****	****	****	***
Iron					
Manganese					
Copper	3.44 ppm	****	****	****	****
Magnesium					
Calcium					
Sodium					
Org.Matter	3.7 %	****	****	**	
0-6" Sol. Salts	0.54 mmho/cm	****	****	*	
6-24" Sol. Salts	0.53 mmho/cm	****	****	*	

1ST CROP CHOICE		
Barley-Malting		
YIELD GOAL		
60 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	10	
P_2O_5	42	Broadcast
K_2O	10	Band(Starter)*
Cl	8	Broadcast
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

2ND CROP CHOICE		
Oats		
YIELD GOAL		
70 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	22	
P_2O_5	31	Broadcast
K_2O	10	Band(Starter)*
Cl	8	Broadcast
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

3RD CROP CHOICE		
Oats		
YIELD GOAL		
80 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	22	
P_2O_5	36	Broadcast
K_2O	10	Band(Starter)*
Cl	8	Broadcast
S	0	
B		
Zn	0	
Fe		
Mn		
Cu	0	
Mg		
Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
8.1							

Crop 1: 17 lbs of 0-0-60 = 8 lbs of Chloride * Caution: Seed Placed Fertilizer Can Cause Injury * Crop Removal: P2O5 = 28 K2O = 30 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: 17 lbs of 0-0-60 = 8 lbs of Chloride * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen Guidelines have been adjusted because most of the Nitrgen in this field is deep. You may consid reducing nitrogen rates 14 lbs/ac on AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 18 K2O = 13 AGVISE Broadcast guidelines will build P & K test levels to the high range over severa years.

Crop 3: 17 lbs of 0-0-60 = 8 lbs of Chloride * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen Guidelines have been adjusted because most of the Nitrgen in this field is deep. You may consid reducing nitrogen rates 14 lbs/ac on AGVISE guidelines due to early sampling. Crop Removal: P2O5 = 20 K2O = 15 AGVISE Broadcast guidelines will build P & K test levels to the high range over severa years.